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EXAMINER

SHELEHEDA, JAMES R

ART UNIT	PAPER NUMBER
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2623

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOmail@sciatl.com

Office Action Summary

Application No.

09/918,376

Applicant(s)

RODRIGUEZ ET AL.

Examiner

JAMES SHELEHEDA

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-20, 23-30, 32-51, 53-58, 60-63, 66-103, 109-111, 113-123 and 125-128 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims pending in the application are 1,3-20,23-30,32-51,53-58,60-63,66-103,109-111,113-123 and 125-128.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 08/17/07 have been fully considered but they are not persuasive.

On pages 26-29, of applicant's response, applicant argues that Dougherty merely discloses receiving, caching, manipulating and displaying hyperlinked and web page data and does not disclose the feature of replacing the elapsed hyperlinked data with new hyperlinked data.

In response, as admitted by applicant, Dougherty discloses receiving, caching, manipulating and displaying hyperlinked and web page data. Further, it is noted that Dougherty discloses wherein the content has a start time and duration, thus provided an elapsed time for the content (column 19, lines 5-24). Further, Dougherty discloses wherein the process of receiving and caching the content is an ongoing process for each upcoming program (Fig. 6; column 18, line 7-column 19, line 25).

Thus, Dougherty discloses wherein content is received, cached and then utilized at its intended time. Later, additional content is received, cached and utilized at its intended time. As storage capacity is not infinite, at some point the previously displayed content will eventually be deleted and newer content will be stored. This is further evidenced by Dougherty's use of RAM for 'caching' the content (column 14, lines 49-54), as caching is utilized to describe the temporary storage of data and RAM is a volatile memory type which does not retain data when power is removed.

As the claims merely require that the replacing of the content occur "after" the specific time, Dougherty clearly meets the claim limitations, as the content is valid for a specific time (defined duration) and then at some point in the future would be removed and replaced with newer content.

2. In response to applicant's arguments on pages 30-31, in regards to the Official Notice, applicant's arguments regarding the provided references are not convincing.

Basawapatna discloses that it was known to design a television receiver to allow the simultaneous receipt of both analog and digital channels transmitted from a single headend (column 8, lines 52-65).

Rasson discloses wherein it was known for a headend to transmit both analog and digital channels over a single communications path (column 4, lines 49-59).

This clearly identifies that it was known to those of ordinary skill in the art at the time for a television receiver to receive both analog and digital channels.

Additionally, applicant is direct to Newberry (5,625,406) which discloses television receiver which will receive and process video and EPG signals from both received digital and analog channels (column 3, lines 3-37).

Thus, applicant's arguments are not convincing.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 109-111, 113-123 and 125-128 are rejected under 35 U.S.C. 102(e) as being anticipated by Dougherty et al. (Dougherty) (7,028,327) (of record).

As to claims 109 and 121, Dougherty discloses a hyper-linked data caching system, and corresponding method, (column 4, lines 33-64) comprising:

a memory (Fig. 2; column 14, lines 30-58); and

a processor (210) configured with the memory (controlling the system; column 14, lines 19-58) to cache hyper-linked data (column 14, lines 30-58 and column 17, lines 6-21) in a data structure indexed by the time of presentation with a corresponding media content instance and retrieve hyper linked data corresponding to the media content instance (retrieving content indexed by offset time corresponding to display time within a program; column 16, line 16-column 17, line 51 and column 18, lines 6-29 and column 10, table 1 and 2);

wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24).

As to claim 110, Dougherty discloses wherein the logic is further configured to retrieve the hyper-linked data corresponding to a media content instance before the presentation of the media content instance (column 19, lines 15-24).

As to claims 111 and 122, Dougherty discloses wherein an application client is further configured to maintain the hyperlinked data in entries in a hyperlinked data structure indexed by time and date and channel (column 16, lines 13-60).

As to claims 113, 114 and 125, Dougherty disclose wherein the hyper-linked data structure provides a channel directory (column 16, lines 23-44) and subdirectories segregated into time blocks corresponding to the media content instance time period of presentation (see Tables 1 and 2; column 16, line 45-column 17, line 4), wherein the time blocks include a current time block and an upcoming time block (see Tables 1 and 2; column 16, line 45-column 17, line 21).

As to claim 115, Dougherty discloses wherein the current time block and upcoming time block are further segregated into time slots of increased granularity corresponding to the time presentation of the hyper-linked data with a corresponding instance in a media content instance within said time blocks (see Tables 1 and 2; column 16, line 45-column 17, line 21).

As to claims 116 and 123, Dougherty discloses wherein the hyperlinked data structure is updated continuously by the application client to maintain the hyperlinked data for current upcoming media content instances (column 16, line 13-60).

As to claim 117, Dougherty discloses wherein the application client is further configured to update the hyper linked data when the time and date has substantially elapsed (new content for next program; column 16, line 13-60).

As to claims 118 and 126, Dougherty discloses wherein the application client is further configured to use a storage device for caching the hyperlinked data into the storage device from a remote device (Fig. 2; column 14, lines 30-58 and column 19, lines 5-22), wherein the hyperlinked data corresponds to data located in a designated time slot of a presentation of a media content instance (column 19, lines 5-22), wherein the application is further configured to retrieve the hyper linked data from the storage device and present it during its designated time slot during the presentation of the media content instance (column 19, lines 5-22).

As to claims 119 and 127, Dougherty discloses wherein the hyper-linked data includes hyper-linked media content (column 18, line 59-column 19, line 4).

As to claims 120 and 128, Dougherty discloses an application client (controlling the CPE: column 18, lines 5-29), wherein the application client is further configured to

maintain the hyperlinked data in entries in a hyperlinked data structure indexed by time and date and service (column 16, lines 13-60).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14, 16-20, 58-63, 69-75 and 77-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payton (5,790,935) (of record) in view of Norwood (5,983,316) (of record), Ueki (6,285,632) (of record) and Dougherty.

As to claim 1, Payton discloses a dual mode file system in a subscriber network television system (Fig. 2), comprising:

a digital home communication terminal (28) comprising:

a memory with logic (software inherently present in memory to control the local server, 28; column 6, lines 1-50);

a processor configured with the logic (inherently present to control the local server, 28; column 6, lines 1-50) to use local data stored in the local file system (column 7, lines 13-18) and remote data from a virtual file system to support the processor (content stored at the central server instead of locally; column 7, lines 13-20 and lines 47-55) when the local file system is coupled to the DHCT (see Fig. 2; column 7, lines 13-18). While Payton discloses using a virtual file system with remote data and a local

file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion and wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Payton's system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Payton and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

Finally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Payton, Norwood and Ueki's system to include wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is

replaced with a replacement hyper-linked data that also is valid for a specific time, As taught by Dougherty, for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program.

As to claim 58, Payton discloses a dual mode file method in a subscriber network system (Fig. 2), comprising the steps of:

using local data stored in the local file system (column 7, lines 13-18) and remote data from a virtual file system to support the processor (content stored at the central server instead of locally; column 7, lines 13-20 and lines 47-55) when the local file system is coupled to the DHCT (see Fig. 2; column 7, lines 13-18). While Payton discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion and wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are

valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of

managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Payton's system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Payton and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content

format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

Finally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Payton, Norwood and Ueki's system to include wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time, As taught by Dougherty, for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program.

As to claims 3 and 60, Payton, Norwood, Ueki and Dougherty disclose wherein the remote data and the local data includes media content (see Payton at column 4, lines 57-58).

As to claim 4, Payton, Norwood, Ueki and Dougherty disclose wherein the local data is located in a local file system (Fig. 2; column 6, lines 1-19) and the remote data is

located in a virtual file system (see Payton at Fig. 2; column 4, line 55-column 5, line 5 and 26-33).

As to claims 9 and 73, Payton, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to provide feedback to a user when the local file system is available (indicating if the content is locally available or not; see Payton at column 6, lines 31-33).

As to claims 10 and 74, Payton, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to transition from supporting the processor with data from the combination of the virtual file system and the local file system (see Payton at column 8, lines 11-25) to supporting the processor with data from the virtual file system when the logic detects that the local file system is unavailable (user requesting content stored at the central server instead of locally; see Payton at column 7, lines 13-20 and lines 47-55).

As to claims 11 and 62, Payton, Norwood, Ueki and Dougherty disclose wherein the logic is further configured to support the processor with data from the virtual file system (see Payton at column 7, lines 13-20 and lines 47-55) by receiving the data into the memory and causing playback from the virtual file system to a screen display (see Payton at column 7, lines 13-20 and lines 47-55, column 8, lines 11-21 and Fig. 5).

As to claims 12, 61 and 75, Payton, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to substantially simultaneously transfer data to the local file system (transmitting content from the refresh queue to local storage whenever bandwidth is available; see Payton at column 7, lines 36-56) while receiving additional data from the virtual file system to the memory (receiving an on-demand requested movie; see Payton at column 7, lines 13-20 and lines 47-55, column 8, lines 11-21 and Fig. 5).

As to claim 13, Payton, Norwood, Ueki and Dougherty disclose wherein the logic is further configured to support the processor with data from the local file system by receiving the data into the memory (see Payton at column 7, lines 12-18), wherein the logic is further configured to cause playback from the memory to a screen display (see Payton at Fig. 5; column 8, lines 35-37 and lines 15-21).

As to claims 14 and 63, Payton, Norwood, Ueki and Dougherty disclose wherein the logic is configured to support the processor with data from the local file system by streaming the data from the local file system to a display device (see Payton at Fig. 5; column 8, lines 35-37 and lines 15-21).

As to claims 16 and 77, Payton, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to store in the local file system data associated with a future media content instance (storing recommended movies in

advance; see Payton at column 4, lines 8-22), wherein said data is received into the local file system in advance of the presentation of said future media content instance (see Payton at column 3, lines 18-42 and column 4, lines 8-22).

As to claims 17 and 78, Payton, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive data from the virtual file system to the local file system while substantially simultaneously uploading data from the local file system (simultaneously displaying and storing locally to allow pause and rewind; see Payton at column 8, lines 11-25).

As to claims 18 and 79, Payton, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to perform multiple read operations and multiple write operations in parallel to access a plurality of data in the local file system (see Payton at column 7, lines 13-56 and column 8, lines 11-25).

As to claims 19 and 80, Payton, Norwood, Ueki and Dougherty disclose wherein the multiple read operations and multiple write operations occur substantially concurrently within substantially the same window of time (see Payton at column 7, lines 13-56 and column 8, lines 11-25).

As to claims 20 and 81, Payton, Norwood, Ueki and Dougherty disclose wherein the multiple read operations and multiple write operations share slices of a window of

time as if occurring substantially in parallel (see Payton at column 7, lines 13-56 and column 8, lines 11-25).

As to claims 5-8 and 69-72, Payton, Norwood, Ueki and Dougherty disclose detecting when the system is connected, disconnected, operable or inoperable (see Norwood at column 5, lines 23-42).

7. Claims 1, 4, 15, 23-25, 50-51, 53-58, 66, 76, 82 and 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dougherty in view of Norwood and Ueki.

As to claim 1, Dougherty discloses a dual mode file system in a subscriber network television system (column 4, lines 33-64), comprising:

- a digital home communication terminal (see Fig. 2) comprising:

- a memory with logic (Fig. 2; computer software to control the system; column 13, line 52-column 14, line 58);

- a processor configured with the logic (310; column 13, line 52-column 14, line 58) to use local data stored in the local file system (precached data; column 18, line 59-column 19, line 24) and remote data from a virtual file system to support the processor (displaying remote Internet web pages and local stored pages; column 19, lines 5-24) when the local file system is coupled to the DHCT (see Fig. 2; column 14, lines 30-58 and column 19, lines 5-24);

- wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries

in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24).

While Dougherty discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in

available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18,

line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Dougherty's system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Dougherty and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

As to claim 58, Dougherty discloses a dual mode file system in a subscriber network television system (column 4, lines 33-64), comprising:

using local data stored in the local filed system and remote data from a virtual file system to support the processor (displaying remote Internet web pages and local stored pages; column 19, lines 5-24) when the local file system is coupled to the DHCT (see Fig. 2; column 14, lines 30-58 and column 19, lines 5-24);

retrieving hyper linked data, and maintaining the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24).

While Dougherty discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Dougherty's system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Dougherty and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

As to claim 4, Dougherty and Norwood disclose wherein the local data is located in a local file system (see Dougherty at column 19, lines 5-24) and the remote data is located in a virtual file system (see Dougherty at column 19, lines 5-24).

As to claims 15 and 76, Dougherty, Norwood and Ueki disclose wherein the processor is further configured with the logic to receive data through an out of band channel (see Dougherty at column 14, lines 3-29).

As to claims 23 and 66, Dougherty, Norwood and Ueki disclose wherein the media is partitioned into a third media content portion for streaming media content for presentation to a user (see Dougherty at column 14, lines 5-24).

As to claims 24 and 82, Dougherty, Norwood and Ueki disclose wherein the media partitions are user configurable (see Ueki at column 23, line 60-column 24, line 26).

As to claims 25 and 83, Daniels, Norwood, Ueki and Dougherty disclose two tuners for receiving among a plurality of transmission channels (see Daniels at column 25, lines 3-13), further comprising an out of band channel for receiving and sending data (data tuner; see Daniels at Figs. 20-21 and column 26, lines 38-43), further comprising a communication port (see Daniels at column 23, lines 29-35).

As to claim 49, Dougherty, Norwood and Ueki disclose wherein the processor is further configured with the logic to retrieve hyper linked data corresponding to a media content instance before the presentation of said media content instance (precache; see Dougherty at column 19, lines 5-24).

As to claim 50, Dougherty, Norwood and Ueki disclose wherein an application client is further configured to maintain the hyperlinked data in entries in a hyperlinked data structure indexed by time and date and service (see Dougherty at column 16, lines 13-60).

As to claim 51, Dougherty, Norwood and Ueki disclose wherein an application client is further configured to maintain the hyperlinked data in entries in a hyperlinked data structure indexed by time and date and channel (see Dougherty at column 16, lines 13-60).

As to claim 53, Dougherty, Norwood and Ueki disclose wherein the hyper-linked data structure provides a channel directory (see Dougherty at column 16, lines 23-44) and subdirectories segregated into time blocks corresponding to the media content instance time period of presentation (see Tables 1 and 2; column 16, line 45-column 17, line 4), wherein the time blocks include a current time block and an upcoming time block (see Tables 1 and 2; column 16, line 45-column 17, line 21).

As to claim 54, Dougherty, Norwood and Ueki disclose wherein the current time block and upcoming time block are further segregated into time slots of increased granularity corresponding to the time presentation of the hyper-linked data with a

corresponding instance in a media content instance within said time blocks (see Tables 1 and 2; column 16, line 45-column 17, line 21).

As to claim 55, Dougherty, Norwood and Ueki disclose wherein the hyperlinked data structure is updated continuously by the application client to maintain the hyperlinked data for current upcoming media content instances (column 16, line 13-60).

As to claim 56, Dougherty, Norwood and Ueki disclose wherein the application client is further configured to update the hyperlinked data when the time and date has substantially elapsed (storing new time dependent; column 18, line 30-column 19, line 24).

As to claim 57, Dougherty, Norwood and Ueki disclose wherein the application client is further configured to use a local file system for caching the hyperlinked data into the local file system from a virtual file system (Fig. 2; column 14, lines 30-58 and column 19, lines 5-22), wherein the hyperlinked data corresponds to data located in a designated time slot of a presentation of a media content instance (column 19, lines 5-22), wherein the application is further configured to retrieve the hyper linked data from the local file system and present it during its designated time slot during the presentation of the media content instance (column 19, lines 5-22).

8. Claims 1,4,15,23-30,32-36,38,48,49,58,67,68,76,82-92,94,102 and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniels (6,973,669) (of record) in view of Norwood, Ueki and Dougherty.

As to claim 1, Daniels discloses a dual mode file system in a subscriber network television system (column 4, lines 23-38 and column 24, lines 13-34), comprising:

a digital home communication terminal (see Fig. 1) comprising:

a memory with logic (computer software to control the system; column 15, lines 58-63 and column 23, lines 39-42);

a processor configured with the logic (controlling the system; column 15, lines 58-63) to use local data stored in the local file system (local stored pages; column 24, lines 11-24 and column 23, lines 39-50) and remote data from a virtual file system to support the processor (displaying remote Internet web pages and local stored pages; column 24, lines 11-24 and column 23, lines 39-50) when the local file system is coupled to the DHCT (see Fig. 1; column 24, lines 11-24 and column 23, lines 39-50).

While Daniels discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion and wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels' system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer

system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

Finally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels, Norwood and Ueki's system to include wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time, As taught by Dougherty, for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program.

As to claim 58, Daniels discloses a dual mode file system in a subscriber network television system (column 4, lines 23-38 and column 24, lines 13-34), comprising:

searching for local data (column 24, lines 11-38);

using local data stored in the local filed system and remote data from a virtual file system to support the processor (displaying remote Internet web pages when not locally stored; column 24, lines 11-24 and column 23, lines 39-50) when the local file system is coupled to the DHCT (see Fig. 1; column 24, lines 11-24 and column 23, lines 39-50).

While Daniels discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion and wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels' system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content

with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

Finally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels, Norwood and Ueki's system to include wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time, As taught by Dougherty, for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program.

As to claim 4, Daniels, Norwood, Ueki and Dougherty disclose wherein the local data is located in a local file system (see Daniels at column 24, lines 11-34) and the remote data is located in a virtual file system (see Daniels at column 24, lines 11-24 and column 23, lines 39-50).

As to claims 15 and 76, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive data through an out of band channel (with a data tuner; see Daniels at Figs. 20-21 and column 26, lines 38-43).

As to claims 23 and 66, Daniels, Norwood, Ueki and Dougherty disclose wherein the media is partitioned into a third media content portion for streaming media content for presentation to a user (third portion to properly store and playback after later breaks; see Daniels at column 14, line 37-column 15, line 11).

As to claims 24 and 82, Daniels, Norwood, Ueki and Dougherty disclose wherein the media partitions are user configurable (see Ueki at column 23, line 60-column 24, line 26).

As to claims 25 and 83, Daniels, Norwood, Ueki and Dougherty disclose two tuners for receiving among a plurality of transmission channels (see Daniels at column 25, lines 3-13), further comprising an out of band channel for receiving and sending data (data tuner; see Daniels at Figs. 20-21 and column 26, lines 38-43), further comprising a communication port (see Daniels at column 23, lines 29-35).

As to claims 27 and 85, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to request a plurality of data simultaneously from the plurality of the transmission channels (see Daniels at column 25, lines 3-13).

As to claims 28, Daniels, Norwood, Ueki and Dougherty disclose wherein the memory and the local file system store application data (see Daniels at column 24, lines

11-24, column 26, lines 14-27 and column 27, lines 35-56), application executable programs (see Daniels at column 24, lines 11-24, column 26, lines 14-27 and column 27, lines 35-56), and data associated with applications (see Daniels at column 24, lines 11-24, column 26, lines 14-27 and column 27, lines 35-56), and data associated with media services (see Daniels at column 24, lines 11-24, column 26, lines 14-27 and column 27, lines 35-56).

As to claims 29 and 86, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to perform a multiplicity of write operations to the local file system substantially in parallel to store data and application clients from a subscriber television network (see Daniels at column 7, line 48-column 8, line 8), from the processor, and from a local device connected to the communication port (see Daniels at column 23, lines 29-35).

As to claims 30 and 87, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to perform a multiplicity of read operations from the local file system in parallel to retrieve data and application clients previously stored in the local file system (see Daniels at Fig. 14; column 25, lines 3-13) to transmit the respective data to a local device connected to the communication port (see Daniels at column 23, lines 29-35), to the memory for use by an application client or operating system executing in the processor (see Daniels at column 26, lines 14-27)

and to be transmitted to a destination in the subscriber network (viewer preferences being sent to the television signal provider; see Daniels at column 26, lines 14-27).

As to claims 32 and 88, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to substantially simultaneously permanently record a media content instance received from one transmission channel and temporarily store a media content instance received from another transmission channel (see Daniels at column 2, lines 48-60, column 7, line 48-column 8, line 8 and column 6, lines 48-59).

As to claims 33 and 89, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to substantially simultaneously permanently record a media content instance received from one transmission channel and temporarily store a media content instance received from another transmission channel (see Daniels at column 2, lines 48-60, column 7, line 48-column 8, line 8 and column 6, lines 48-59).

As to claims 34 and 90, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to substantially simultaneously display three media content instances (see Daniels at Fig. 14; column 24, line 63-column 25, line 13 and column 22, line 48-column 23, line 15), wherein two media content instances are received from the transmission channels (see Daniels at Fig. 14; column

24, line 63-column 25, line 13) and the third media content instance is received from the local file system (see Daniels at Fig. 14; column 24, line 63-column 25, line 13 and column 22, line 48-column 23, line 15).

As to claims 35 and 91, Daniels, Norwood, Ueki and Dougherty disclose wherein the media content instances from the transmission channels are received in real-time (see Daniels at Fig. 14; column 24, line 63-column 25, line 13).

As to claims 36, 67 and 92, Daniels, Norwood, Ueki and Dougherty disclose an application client, wherein the processor is further configured with the logic to use the memory and the local file system for storing application client data in data structures with time sensitive data entries maintained by client daemon task (receiving and storing program scheduling information; see Daniels at Fig. 22; column 27, lines 35-47).

As to claims 38 and 94, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the application client data from a plurality of in band tuners (plurality of tuners to receive preview video for the guide; see Daniels at column 24, line 63-column 25, line 13).

As to claims 49 and 103, Daniels, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to retrieve hyper-linked data

corresponding to a media content instance before the presentation of the media content instance (see Daniels at column 24, lines 11-34).

As to claims 48, 68 and 102, Daniels, Norwood, Ueki and Dougherty disclose the step of receiving sprites from the virtual file system and storing the sprites in the local file system (web graphics; see Daniels at column 4, lines 23-38 and column 24, lines 1-34), further comprising the step of retrieving the sprites from the local file system and causing the presentation of the sprites in coordination with the presentation of a media content instance (see Daniels at column 4, lines 23-38 and column 24, lines 13-34).

As to claims 26 and 84, while Daniels, Norwood, Ueki and Dougherty disclose a plurality of transmission channels, they fail to specifically disclose at least one digital transmission channel and at least one analog transmission channel.

The examiner takes Official Notice that it was notoriously well known in the art at the time of invention by applicant for a television receiver to utilize both an analog and digital transmission channel, such as when receiving both off-air television and digital satellite, for the typical benefit of providing a viewer with an increased amount of information and content by allowing access to both digital and analog content providers and connections.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Daniels, Norwood, Ueki and Dougherty's system to include at least one digital transmission channel and at least one analog transmission

channel for the typical benefit of providing a viewer with an increased amount of information and content by allowing access to both digital and analog content providers and connections.

9. Claims 1, 4, 36, 37, 39-47, 58, 59, 92, 93 and 95-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schein et al. (Schein) (6,002,394) (of record) in view of Norwood, Ueki and Dougherty.

As to claim 1, Schein discloses a dual mode file system in a subscriber network television system (Fig. 1), comprising:

- a digital home communication terminal comprising:

- a memory with logic (column 6, lines 61-65);

- a processor configured with the logic (column 6, lines 61-65) to use local data stored in the file system and remote data from a virtual file system to support the processor (column 5, lines 38-65) when the local file system is coupled to the DHCT (see Figs. 1 and 3).

While Schein discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received

into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Schein's system to include determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Schein and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption

media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

Finally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Schein, Norwood and Ueki's system to include wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time, As taught by Dougherty, for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program.

As to claim 58, Schein discloses a dual mode file method in a subscriber network television system (Fig. 1), comprising:

using local data stored in the file system and remote data from a virtual file system to support the processor (column 5, lines 38-65) when the local file system is coupled to the DHCT (see Figs. 1 and 3).

While Schein discloses using a virtual file system with remote data and a local file system with local data to support the processor, he fails to specifically disclose determining whether the local file system is coupled, and responsive to determining whether the local file system is coupled, utilizing just the virtual file system or both the virtual file system and the local file system and partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format,

wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion.

In an analogous art, Norwood discloses a computer storage system (Fig. 1) wherein a disk monitor will determine whether local file systems (disk drives; column 2, lines 38-48) are currently coupled and available for use by the system (column 2, lines 28-38 and column 5, lines 22-42) to allow the system to dynamically determine which resources are currently available (column 2, line 28-column 3, line 14) for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly (see Abstract and column 2, line 28-column 3, line 14 and column 1, lines 8-31).

Additionally, in an analogous art, Ueki discloses a video receiver/reproduction device (Fig. 1-2) which will partition a storage device (buffer memory, 19) into a data partition for storing low memory consumption media (smaller partition dedicated to

reproduction of media; column 24, lines 20-63) and a media content portion for storing media content (buffering media to be recorded in a larger partition; column 24, lines 45-63) having a media content format (recorded media; column 24, lines 45-63),

wherein the media content is received into the data portion (smaller partition) unless the received media content consumes a threshold memory capacity (as the media is being recorded and requires more buffer memory; column 24, lines 45-63) that results in the media content with at least the threshold memory capacity being received into the media content portion (column 24, lines 45-63) for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate (see abstract, column 1, lines 6-32 and column 24, lines 45-63).

Finally, in an analogous art, Dougherty discloses a video receiver wherein the processor is configured with logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure (column 16, lines 13-60), wherein the hyper-linked data entries are valid for a specific time (defined start times and durations; column 19, lines 5-24), after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time (storing new time dependent; column 18, line 30-column 19, line 24) for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program (column 2, lines 16-28).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Schein's system to include determining whether the local file system is coupled, and responsive to determining whether the local file system

is coupled, utilizing just the virtual file system or both the virtual file system and the local file system, as taught by Norwood, for the typical benefit of allowing the computer system to dynamically determine status changes in available storage resources and operate accordingly.

Additionally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Schein and Norwood's system to include partitioning a storage device into a data partition for storing low memory consumption media and a media content portion for storing media content having a media content format, wherein the media content is received into the data portion unless the received media content consumes a threshold memory capacity that results in the media content with at least the threshold memory capacity being received into the media content portion., as taught by Ueki, for the typical benefit of managing storage/reproduction of media to maximize the utilized transfer rate.

Finally, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Schein, Norwood and Ueki's system to include wherein the processor is further configured with the logic to retrieve hyper linked data, and an application client is configured to maintain the hyperlinked data in entries in a hyperlinked data structure, wherein the hyper-linked data entries are valid for a specific time, after which said hyper-linked data associated with an elapsed data entry is replaced with a replacement hyper-linked data that also is valid for a specific time, As taught by Dougherty, for the typical benefit of maintaining interactivity within a program in synchrony with particular events of the program.

As to claim 4, Schein, Norwood, Ueki and Dougherty disclose wherein the local data is located in a local file system (see Schein at column 5, lines 38-65) and the remote data is located in a virtual file system (remote EPG database; see Schein at column 5, lines 38-65).

As to claims 36 and 92, Schein, Norwood, Ueki and Dougherty disclose an application client, wherein the processor is further configured with the logic to use the memory and the local file system for storing application client data in data structures with time-sensitive data entries maintained by an application client daemon task (local database storing a program guide with channel and time entries for programs; see Schein at column 7, lines 16-45 and column 9, line 22-column 10, line 28).

As to claims 37 and 93, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the application client data from an in-band tuner (received with the video signals; see Schein at column 6, line 51-column 7, line 10).

As to claims 39 and 95, Schein, Norwood, Ueki and Dougherty disclose wherein the application client is an electronic programming guide with electronic program guide information (see Schein at column 7, lines 16-45 and column 9, line 22-column 10, line 28), wherein the electronic programming guide information includes a list of media

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content instances for a standard amount of days (see Schein at column 9, line 22-column 10, line 28), a list of media content instances for an extended amount of days (see Schein at column 9, line 22-column 10, line 28), channels for the media content instances (see Schein at column 9, line 22-column 10, line 28), standard description information for the media content instances (see Schein at column 9, line 22-column 10, line 28), long description information for the media content instances (see Schein at column 9, line 22-column 10, line 28), and media content instance preview audio and video clips (see Schein at column 22, lines 3-9).

As to claims 40 and 96, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the electronic programming guide information entirely into the memory (see Schein at column 9, lines 22-62), wherein the processor is further configured with the logic to access the electronic programming guide information for presentation in a display device (see Schein at column 14, lines 18-33).

As to claims 41 and 97, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the electronic programming guide information entirely into the local file system (see Schein at column 9, lines 22-62), wherein the processor is further configured with the logic to access the electronic programming guide information for presentation in a display device (see Schein at column 14, lines 18-33).

As to claim 42, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the list of media content instances for an extended amount of days and the corresponding standard description information into the local file system (see Schein at column 9, line 22-column 10, line 28).

As to claim 43, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the list of media content instances for an extended amount of days and the corresponding standard description information and long description information into the local file system (see Schein at column 9, line 22-column 10, line 28).

As to claims 44 and 98, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the long description information into the local file system for the list of media content instances for the standard amount of days stored in the memory (see Schein at column 9, line 22-column 10, line 28).

As to claims 45 and 99, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to receive the media content instance previous audio and data clips associated with the media content instances for the

standard amount of days and store said media content instance preview audio and data clips into the memory (see Schein at column 9, line 22-column 10, line 28 and column 22, lines 3-9).

As to claims 46 and 100, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to transfer said media content instance previous audio and data clips from the memory to the local file system (see Schein at Fig. 3; column 8, line 35-column 9, line 22 and column 22, lines 3-9), wherein the processor is further configured with the logic to access said media content instance preview audio and data clips from the local file system to the memory (see Schein at Fig. 3; column 8, line 35-column 9, line 22 and column 22, lines 3-9), wherein the processor is further configured with the logic to present said media content preview audio and data clips on a display device from the memory (see Schein at Fig. 3; column 8, line 35-column 9, line 22 and column 22, lines 3-9).

As to claims 47 and 101, Schein, Norwood, Ueki and Dougherty disclose wherein the processor is further configured with the logic to transfer said media content instance previous audio and data clips from the memory to the local file system (see Schein at Fig. 3; column 8, line 35-column 9, line 22 and column 22, lines 3-9), wherein the processor is further configured with the logic to access said media content instance preview audio and data clips from the local file system (see Schein at Fig. 3; column 8, line 35-column 9, line 22 and column 22, lines 3-9) and present said media content

preview audio and data clips on a display device from the local file system (see Schein at Fig. 3; column 8, line 35-column 9, line 22 and column 22, lines 3-9).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES SHELEHEDA whose telephone number is (571)272-7357. The examiner can normally be reached on Monday - Friday, 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James Sheleheda
Examiner, Art Unit 2623

JS

/Chris Kelley/
Supervisory Patent Examiner, Art Unit 2623